

## **REMARKS**

In response to the office action of May 3, 2007, Claims 1, 2, 4-8, and 10 have been amended. Claims 3 and 9 remain unchanged.

In response to the Examiner's inquiry and the Applicant's obligation under 37 C.F.R. 1.56 and further in compliance with 35 U.S.C. par. 102 (f) and (g) and 35 U.S.C. 103, the subject matter of the various claims was commonly owned at the time the invention was made.

No amendment made is related to the statutory requirements of patentability unless expressly stated herein. No amendment is made for the purpose of narrowing the scope of any claim, unless Applicant had argued herein that such amendment is made to distinguish over a particular reference or combination of references. Any remarks made herein with respect to a given claim or amendment is intended only in the context of that specific claim or amendment, and should not be applied to other claims, amendments, or aspects of Applicant's invention.

### **Objection to the Specification**

In response to the objection to the specification that the abstract of the disclosure includes the title of the invention, the specification has been amended to remove the title of the disclosure from the abstract of the disclosure.

### **Acknowledgement of Allowable Subject Matter**

Applicant acknowledges the allowability of claim 8 once amended to be rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant has so amended this claim.

**Rejection of Claims 1-7 and 9-10 under 35 U.S.C. § 103 (a) as being unpatentable over Akheter et al (US Patent Publication Number 2004/0137851) in view of Kim et al (US Patent Number 7,190,748):**

Applicant has amended the claims to clarify the invention. Applicant therefore respectfully requests reconsideration of the rejection of claims 1-7 and 9-10 under 35 U.S.C. § 103(a) as being unpatentable over Akheter et al (US Patent Publication Number 2004/0137851) in view of Kim et al (US Patent Number 7,190,748) as herein amended.

In response to the office action dated May 3, 2007 claims 1, 2, 4, 5, 6, 7 and 10 have been amended. Support for the amendment of the claims can be found throughout the description, for example see page 5, lines 6 to 16. Amended independent Claims 1, 7 and 10 define a method and system that generate a frequency correction estimate for shifting a received signal, within a WLAN, to allow correct reception of the signal. Claims 1, 7 and 10 have been amended to clarify that the frequency correction estimate is computed based on an average of a frequency offset estimate with a previously stored frequency offset estimate which itself is an average of the frequency offset estimate and at least one prior frequency offset estimate.

Further Independent Claim 5 has been amended to clarify that the frequency offset estimate is determined based on the frequency deviation of a received signal from a transmitter in a WLAN communication system. Claim 5 has also been amended to clarify that the frequency correction estimate is an averaged value of the frequency offset estimate and a previously stored frequency correction estimate. Claim 6 has been amended to clarify that the invention includes a transceiver performing the method as described in Claim 5.

In contrast, neither of the cited references, taken singly or in combination, teaches the computation of a frequency correction estimate which is an average of the frequency offset estimate and the previously stored frequency correction estimate. Further, neither of the cited references, taken singly or in combination, teaches using a single channel for transmitting and receiving signals.

Akheter et al (US Patent Publication Number 2004/0137851) discloses a frequency offset controller using feedback, and an offset estimator. The disclosed frequency offset estimate utilizes the “amplitude of the in-phase and quadrature of the signal received by the frequency estimator”, i.e. an “input to the frequency estimator at discrete time index n.” However, the

present invention averages the frequency offset estimate with an average of previously stored frequency offset estimates to compute the frequency correction estimate. Therefore claims 1, 7, and 10 of the present invention are not anticipated by Akheter.

Kim et al (US2003/0072397) discloses a carrier frequency offset estimate (CFO) unit that receives wireless signals via multiple antenna's and generates observation samples to calculate a correlation between the observation samples and a delayed version of observation samples, then CFO unit averages the correlations over all the antennas and estimates carrier frequency offset. However, the present invention averages the frequency offset estimate with an average of previous frequency offset estimates to compute the frequency correction estimate. The present invention further uses a single channel for transmitting and receiving signals. Therefore claims 1, 7, and 10 of the present invention are not anticipated by Kim.

Dependent claim(s) 2-4, 6, and 9 and depend from, and include all the limitations of independent claim(s) 1, 5, and 7. Therefore, Applicant respectfully requests the reconsideration of dependent claim(s) 2-4, 6, and 9 and requests withdrawal of the rejection.

Since the combination of Akheter et al (US Patent Publication Number 2004/0137851) in view of Kim et al (US Patent Number 7,190,748) fails to disclose Applicant's claimed invention as claimed in claim(s) 1-7 and 9-10, Applicant respectfully requests withdrawal of the rejection of claims 1-7 and 9-10 under 35 USC 103(a). Applicant requests that claim(s) 1-7 and 9-10 now be passed to allowance.

Applicant has reviewed the other references of record and believes that Applicant's claimed invention is patentably distinct and nonobvious over each reference taken alone or in combination. Applicant respectfully requests that a timely Notice of Allowance be issued in this case. Such action is earnestly solicited by the Applicant. Should the Examiner have any questions, comments, or suggestions, the Examiner is invited to contact the Applicant's attorney or agent at the telephone number indicated below.

Please charge any fees that may be due to Deposit Account 502117, Motorola, Inc.

Respectfully submitted,

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